

Paint Stripping & Miscellaneous Surface Coating Rule



Mary Dever-Putnam, EPA Region I

Background



- NESHAP: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources published 1/9/08 (73 FR 1738)
- Area Sources - federal HAP emissions less than 10 tons per year (TPY) of any one, and less than 25 TPY of all combined



Why the need for this rule?

- The CAA requires EPA to develop emission standards for a list of 187 hazardous air pollutants (HAPs). EPA developed standards for “major sources”.
- The CAA also requires EPA to identify and regulate the sources that pose the greatest potential health threats from these pollutants in urban areas. In urban areas, these are generally small sources but large in number and collectively may pose health risks. These are known as “area sources”.
- 70 area source categories have been identified as needing regulation. Auto body is one of these source categories needing regulation.

Why the need for this Rule?

- The CAA requires **EPA to reduce exposure to HAPs** because these chemicals are known or suspected to cause cancer or other serious health effects such as birth defects. Data from paint suppliers has shown that coatings used in automobile and mobile equipment refinishing contain HAPs such as chromium, lead, cadmium, manganese, and nickel compounds (targeted HAPs).



Why We are Here?

EPA Assistance & Enforcement

- One of EPA's roles is to see that environmental laws are carried out (that pollution is reduced or eliminated)
- EPA provides compliance assistance but also monitors compliance through inspections, inquiries, data review, etc.
- With new regulations there is generally an initial period of assistance and training before they take effect (three years for existing shops for this new air pollution rule)
- These workshops are designed to help you understand what you have to do to comply with the regulations well in advance of the compliance deadline



EPA's Civil and Criminal Enforcement Programs



- EPA may assess penalties for violations of federal environmental laws
- EPA can enforce environmental laws under both civil and criminal authorities
- It's your affirmative duty to find out about, and comply with, all federal environmental compliance requirements
- You are still subject to civil enforcement even if you don't know about a law or regulation
- Criminal enforcement is taken for knowing violations of environmental laws and regulations
- You can report any suspected violations to EPA at <http://www.epa.gov/compliance/complaints> in English or Spanish



State and Local Enforcement

- In addition to federal regulations and enforcement, you should be aware that states and municipalities also create laws and regulations and carry out enforcement. You are urged to find out about state and municipal requirements that pertain to your operations.
- For this new air regulation, state environmental agencies may elect to accept enforcement authority.

Reasons for Regulation...

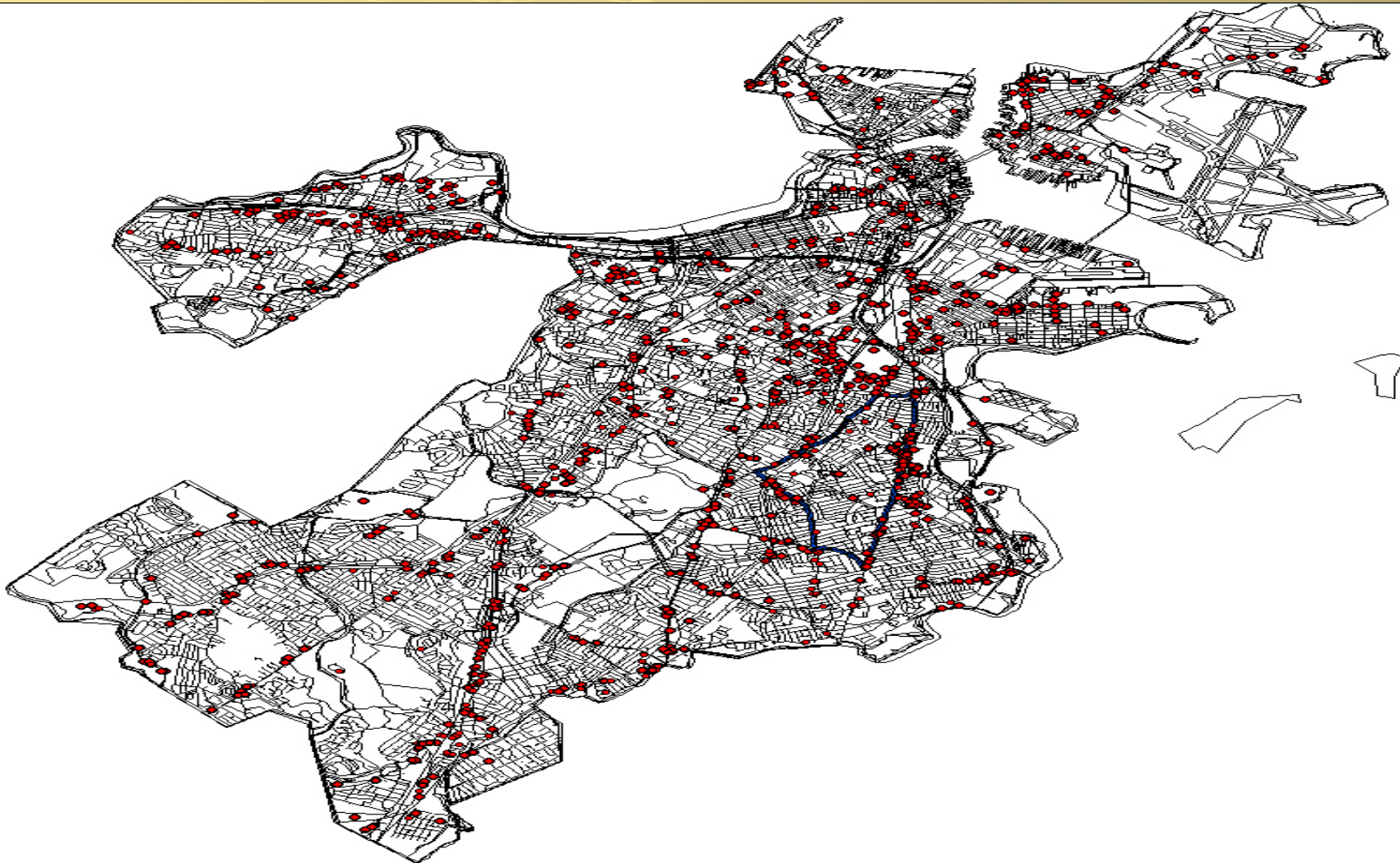
Shops adjacent to homes



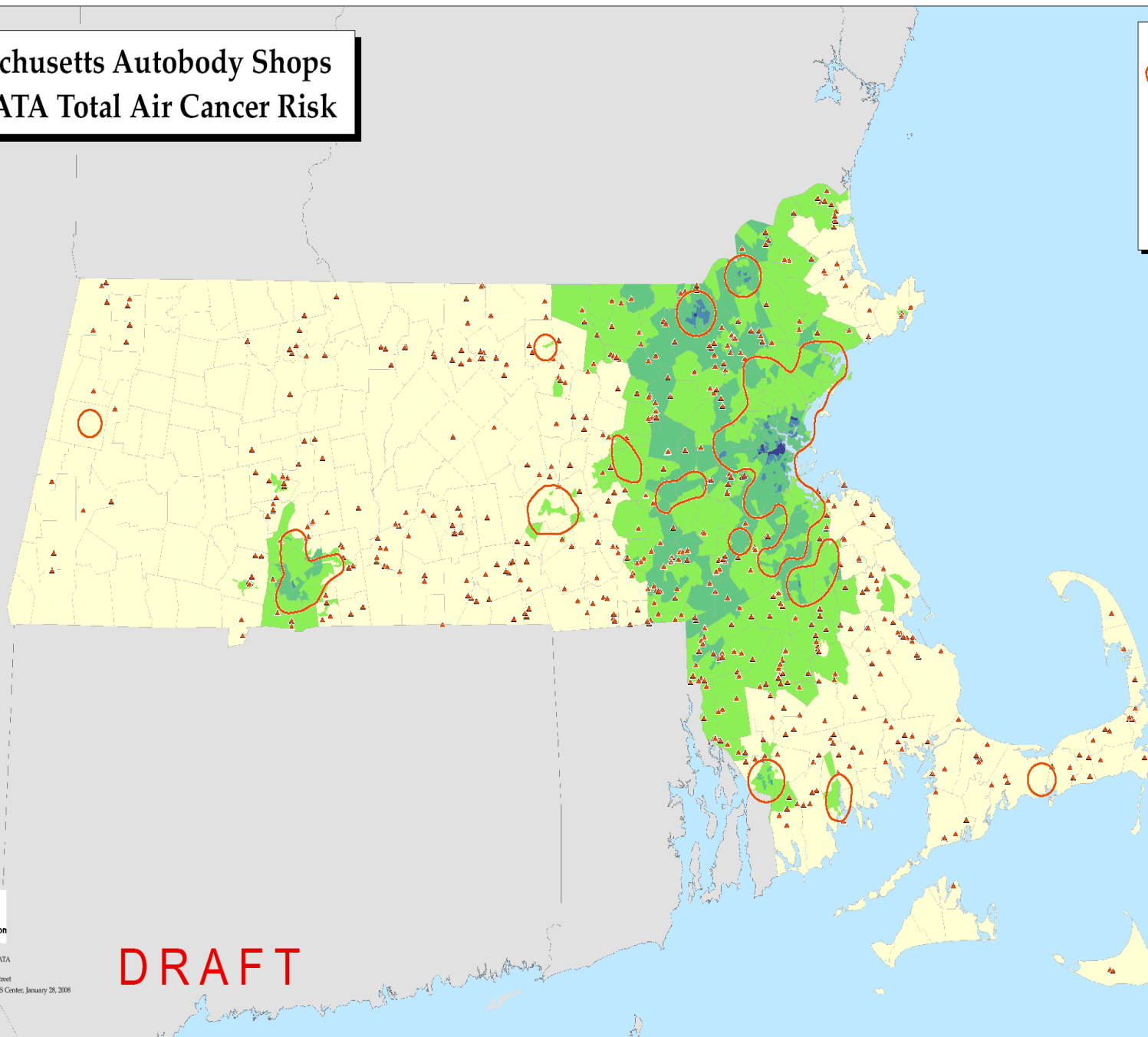
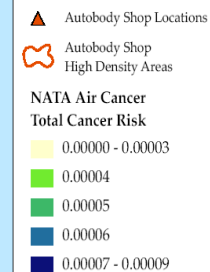
Spraying outside is common



Hundreds of shops in urban areas



Massachusetts Autobody Shops and NATA Total Air Cancer Risk



Shops need assistance to be better neighbors

Before



After



For New CAA Paint Stripping & Surface Coating Rule, 3 Affected Source Categories

- **Paint stripping operations**
 - using Methylene Chloride (MeCl) to remove dried paint from wood, plastic, metal or other
- **Motor vehicle and mobile equipment spray-applied surface coating operations**
- **Miscellaneous surface coating**
 - spray apply coatings containing Cr, Pb, Mn, Ni, or Cd (target HAPs) to any metal or plastic parts or products that are not motor vehicles or mobile equipment

Sources NOT affected



- Armed Forces, NASA, or National Nuclear Security Administration operations performing affected activities
- **Affected activities performed on military munitions or equipment for use by Armed Forces**
- Affected activities performed by individuals on personal vehicles, possessions, or property as a hobby or maintenance, or done by individuals for others without compensation (pay). However, if you spray-apply coatings to more than two motor vehicles per year, you are subject regardless of whether compensation is received



Sources NOT affected contd.

- Research and laboratory activities
- Quality control activities
- Activities covered under any other area source NESHAP
- Motor vehicle and mobile equipment spray-applied surface coating operations who successfully petition EPA for exemption, demonstrating that no target HAPs used in any coatings



Activities NOT included

● Spray-applied applications:

- using hand-held device with a cup capacity no more than 3.0 fluid ounces (89 cc)
- powder coating
- hand-held, non-refillable aerosol containers
- non-atomizing technology
 - brushes, rollers, hand wiping
 - coating techniques – flow, dip, electrodeposition, web, coil
 - touch up markers or marking pens
- thermal spray operations using solid metallic or non-metallic materials



Activities NOT included contd.

● affected coatings do not include:

- decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination
- paper film or plastic film that may be pre-coated with adhesive
- adhesives, sealants, maskants, or caulking materials
- temporary protective coatings, lubricants, or surface preparation materials
- in-mold coatings that are spray-applied in the manufacture of reinforced plastic composite parts



How Can My Shop Become Exempt from this Rule?

- You must send a request for an exemption (“petition”) to EPA Region 1
- Your “petition” must include a description of all the coatings that you spray-apply
- You must certify that you do not spray-apply any coatings that contain any of the five key metals called “target HAPs” – compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni) or cadmium (Cd)



Advantages of Switching to Coatings that Don't Contain Toxic Metals

- Understanding what you and your employees are breathing
- Protecting health – you, your employees, your customers, your neighbors
- Save time and money - cost of complying with new EPA air rule
- Manufacturers have been reducing metals content so alternative coatings not containing metals may be available



How to Show that Your Coatings Don't Contain Target HAPs

- A coating contains the target HAP if it contains any “individual target HAP” that is a carcinogen as defined by OSHA at more than 0.1% by mass, or more than 1% for any other individual target HAP
- You need to determine what metal HAPs are in your coatings – review available information and contact your manufacturer or paint distributor
- You can check the manufacturers' website, or rely on material safety data sheets (MSDSs) from the manufacturer, as long as they represent each target HAP compound in the material; or conduct testing (expensive)
- Water-based coatings may not be free of target HAP; you need to check



Submitting a Petition for Exemption

- Sources in New England must submit the request to U.S. EPA New England
- Petition must include a description of the coatings you spray-apply, including product lines, manufacturers and types of coatings used; and your certification that you do not spray-apply any coatings containing the target HAP (signed by responsible official)
- Additional information will be requested as needed (e.g., the documentation you relied upon, copies of MSDS sheets)
- EPA regions and individual facilities may vary in information needed and requested
- Sources in New England may contact Susan Lancey with questions at 617-918-1656, Lancey.Susan@epa.gov

WHEN ARE AUTOBODY SHOPS REQUIRED TO BE IN COMPLIANCE WITH NEW REQUIREMENTS?



- **New sources** must comply by January 9, 2008 or start-up of operations
- **Existing sources** must comply by January 9, 2011



Definition of a New Source

- A source (or body shop) is new if...
 - Began construction after September 17, 2007 by installing new equipment; and
 - The new equipment is used at a source (or body shop) not actively engaged in paint stripping and/or surface coating prior to September 17, 2007
 - construction of new paint booths, enclosed spray gun cleaners, paint stripping equipment to reduce MeCl emissions, or spray guns to comply with the rule do not make an existing source new

General Requirements

Paint Stripping

- Am I using chemical stripping agents that contain Methylene Chloride (MeCl) also known as Dichloromethane (DCM)?? How can I tell?? MSDSs!!!
- Minimize emissions of MeCl using the following management practices
 - evaluate each application for need to remove paint (e.g. can part be re-coated)
 - evaluate each application for **alternative to MeCl**
 - **reduce exposure** of MeCl strippers to air
 - optimize conditions when using MeCl to **reduce evaporation** (e.g., if heating, use lowest possible temperature)
 - use **proper storage and disposal** techniques



Example of Chemical Stripping Agent containing MeCl

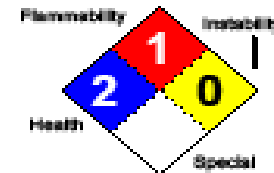


HINT: Don't look for MeCl as the product name... MeCl or DCM will be listed either in MSDS or ingredients list.

HAZARD SAFETY DATA SHEET

Aircraft Remover

HEALTH	2	
FLAMMABILITY	1	
PHYSICAL HAZ.	1	
PPE	B	



Printed: 01/25/2006

Revision: 04/22/2005

Date Created: 04/19/2005

1. Product and Company Identification

Product Code: GAR343
Product Name: Aircraft Remover
Manufacturer Information
Company Name: W. M. Barr
 2105 Channel Avenue
 Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: Barry Henson 901-775-0100 Ext. 252

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA TWA	ACGIH TWA	Other Limits
1. Dichloromethane	75-09-2	60.0 -90.0 %	25 ppm	50 ppm	
2. Methanol	67-56-1	2.0 -10.0 %	200 ppm	200 ppm	
3. Tall Oil Acostx	NA	1.0 -5.0 %			
4. POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(NONYLPHENYL)-.OMEGA.-HYDR	9016-45-9	1.0 -3.0 %			
5.	NA	1.0 -10.0 %			
6. Ammonium hydroxide	1336-21-6	5.0 -15.0 %			
Hazardous Components (Chemical Name)	CAS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Dichloromethane	75-09-2	125 ppm (15 min)			
2. Methanol	67-56-1			250 ppm	
3. Tall Oil Acostx	NA				
4. POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(NONYLPHENYL)-.OMEGA.-HYDR	9016-45-9				
5.	NA				
6. Ammonium hydroxide	1336-21-6				

3. Hazards Identification

Emergency Overview

General Requirements

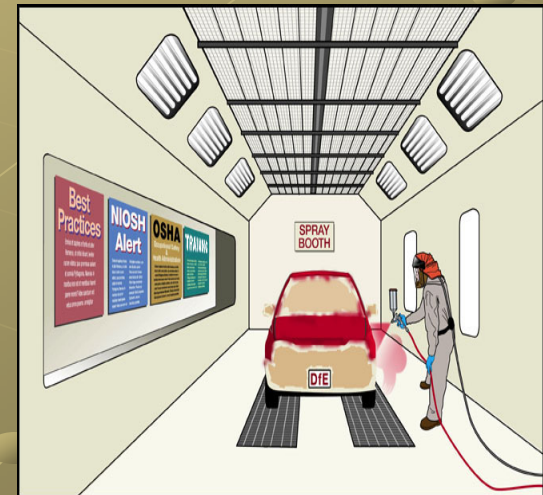
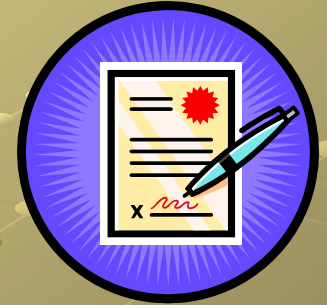
Paint Stripping

- If operation uses > 1 ton of MeCl per year
 - Develop, implement & post a written MeCl minimization plan
- If operation uses ≤ 1 ton of MeCl
 - no written plan is required, but **must comply with minimization management practices**



Motor Vehicle, Mobile Equipment and Misc Surface Coating Compliance

1. Painters must be **certified as completing training** in proper spray application of surface coatings, setup and maintenance of spray equipment
 - Except students of accredited surface coating training program who are under the direct supervision of an instructor who is certified





Motor Vehicle, Mobile Equipment and Misc Surface Coating Compliance

2A. Spray-applied coatings must be applied in spray booth, preparation station, or mobile enclosure that is:

- Fitted with filter system demonstrated to have 98% collection efficiency, using vendor provided test data, or using waterwash spray booths operated to manufacturer's specs

Motor Vehicle, Mobile Equipment and Misc Surface Coating Compliance

2B. Booths and prep stations for complete motor vehicles or mobile equipment must:

- Have full roof and four walls or side curtains, and operate at negative pressure; OR
- Be fully enclosed with seals on all openings, automatic pressure balancing system, operated at ≤ 0.05 inches water gauge positive pressure



Motor Vehicle, Mobile Equipment and Misc. Surface Coating Compliance

2C. Booths or prep stations for miscellaneous coating or vehicle subassemblies must:

- Have full roof, at least 3 complete walls or side curtains, and ventilated so air is drawn into the booth
- Roof and walls may have openings for conveyors



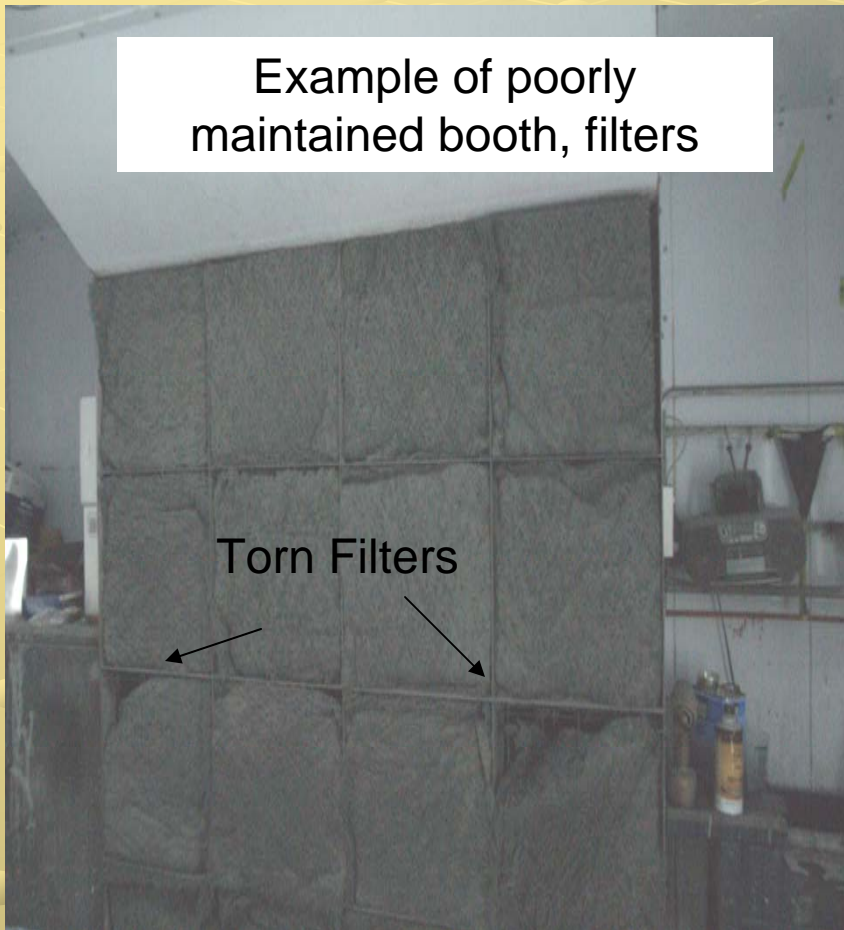
Motor Vehicle, Mobile Equipment and Misc Surface Coating Compliance

3. Mobile ventilated enclosures for spot repairs must:

- Enclose and seal against the surface around the area being coated
- Retain paint overspray within the enclosure and direct it to a filter

Paint Booth Photos from 2008 Site Visits

Example of poorly
maintained booth, filters



Example of well maintained
booth, filters



Paint Mixing Room Photos from 2008 Site Visits

Poorly maintained Mixing room



Well maintained Mixing room





Broad requirements for Surface Coating (rule details requirements)

4A. Spray-applied coatings must be applied with one of the following gun technologies

- high volume, low pressure (HVLP)
- electrostatic
- airless
- air-assisted airless
- with written approval from EPA, other spray technology demonstrated to achieve equivalent transfer efficiency

4B. **Spray gun cleaning operation should prevent atomized mist or avoid spraying cleaning solvent** and paint residue outside container used to collect waste solvent



Motor Vehicle, Mobile Equipment & Misc. Surface Coating Requirements

4C. Listed spray technologies are not required if:

- Painting is performed by students and instructors at paint training centers
- Coating certain aerospace vehicle coating applications

Enclosed Spray Gun Cleaner



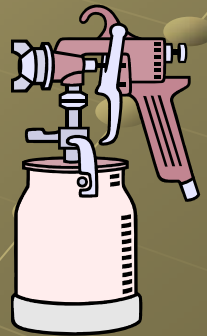
Not required,
but
recommended



Broad requirements for Surface Coating (rule details requirements)

5. **Train all personnel, including contractors, who spray apply coatings:**

- **List of personnel** requiring training
- **Hands on and classroom instruction including:**
 - **spray gun equipment selection, set up, and operation**
- **best spray technique for different types of coatings to improve transfer efficiency and minimize overspray**
 - **routine booth and filter maintenance, filter selection and installation**
 - **compliance with requirements of the NESHAP**
- **Description of methods to document and certify training**



**What kind of training is
required of all technicians
who apply spray
coatings??**

Hands-on & Classroom Training



Notification and Reporting

- Initial Notification must be submitted to EPA:
 - Existing shops - due by January 9, 2010
 - New Shops - due 180 days after start up, or January 9, 2008, whichever is later



Notification and Reporting

● Notification of Compliance Status



- Existing shops that cannot demonstrate compliance at the time you submit your Initial Notification must submit this notification by March 11, 2011
- Include same basic information as Initial Notification
- Indicate date of compliance with all relevant requirements
- Paint stripping sources using more than one ton of MeCl in a year must certify they have written and are implementing their minimization plan

Notification and Reporting



● Annual Notification of Changes Report

- Shops must submit **report annually prior to March 1 if any previously reported information changed** during the previous year
- changes include **paint stripping sources that increase usage of MeCl to more than one ton in a calendar year**
 - submit the changes report by March 1 following the year usage went over one ton of MeCl
 - develop and implement a written minimization plan by December 31
 - submit a notification of compliance status by March 1 of the following year

Recordkeeping



● Paint stripping

- Records of paint strippers containing MeCl, including the MeCl content **sufficient to verify annual usage (Can I demonstrate how much I used in a given year? Keep records to demonstrate usage)**
- copy of minimization plan kept on site, if required (>1 ton)
 - including annual review and updates to plan
- **records of any deviations from requirements** in the rule, including date and time period it occurred, a description of deviation, and corrective actions taken

Recordkeeping



● Surface coating

- painter **training certification(s)** – **classroom & handson**
- documentation of **filter efficiency**
- if spray gun does not meet definition of acceptable technologies and has cup capacity at least 3.0 oz, **documentation from spray gun manufacturer** that Administrator has **determined equivalent** transfer efficiency
- **copies of all notifications and reports** required
- **records of any deviations from requirements** in the rule, including date and time period it occurred, a description of deviation, and corrective actions taken

Where to send Initial Notifications & Compliance Status Notifications

Attention: Air Clerk

US Environmental Protection Agency

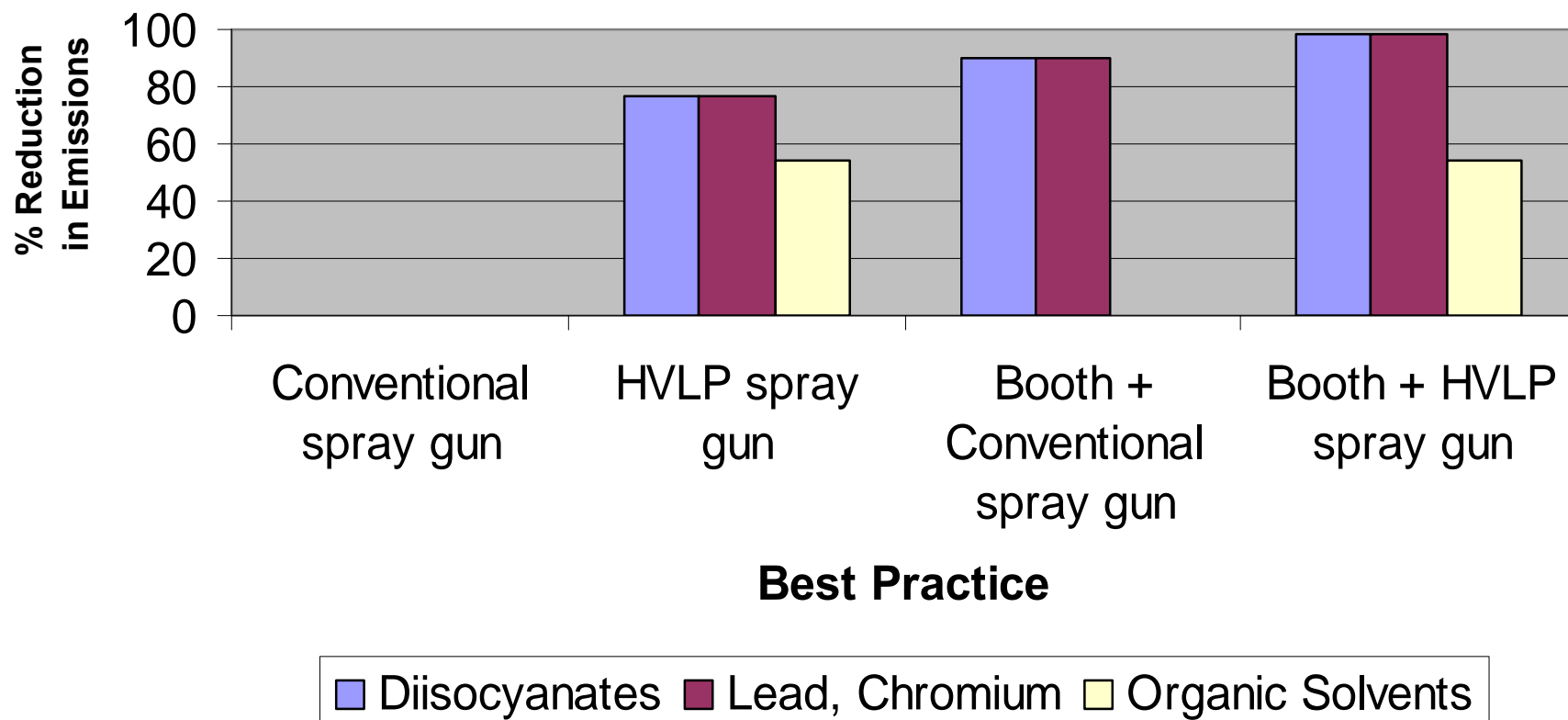
5 Post Office Square, Suite 100

Mail code: OES04-2

Boston MA 02109-3912



Reduction in Auto Body Shop Emissions with Best Practices



For more information



- **Talk to your suppliers!**
- **www.epa.gov/ne/auto - Region I website**
- **www.ccar-greenlink.org - Coordinated Committee for Auto Repair – an Automotive Sector Compliance Assistance Center**
- **<http://www.epa.gov/air/toxicair/community/collision.html> - Collision Repair Campaign Website**
- **Mary Dever-Putnam, EPA Region I, (617) 918-1717
dever.mary@epa.gov**